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Approaches to the influence of culture and language on cognitive assessment instruments: The Australian context

Yvonne Stolk^a

^a Victorian Transcultural Psychiatry Unit, Fitzroy, Victoria, Australia

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EDITORIAL

Approaches to the influence of culture and language on cognitive assessment instruments: The Australian context

What is relevant, and worth learning for an Amazonian Indian, does not necessarily coincide with what is relevant and worth learning for an inhabitant of New York or Islamabad. [Ardila, 1996, p. 239]

There are many ways to be intelligent . . . Standardised tests do not sample all forms of intelligence. [Neisser et al., 1996, pp. 95,97]

This special issue of *Australian Psychologist* is dedicated to the memory of Assoc. Professor Steven Klimidis, who was to have been joint guest editor of this issue, but died unexpectedly on 26 August 2008. Assoc. Professor Klimidis of the Victorian Transcultural Psychiatry Unit (VTPU) and the Centre for International Mental Health, of the University of Melbourne, Australia, was deeply committed to research into the mental health of culturally and linguistically diverse (CALD) communities and to improving equity in mental health service delivery to these communities (Andary, Stolk, & Klimidis, 2003; Klimidis et al., 1999; Minas, Stuart, & Klimidis, 1994; Stolk, Minas, & Klimidis, 2008). As evidence of his long-standing interest in the topic of this issue, he was a principal contributor at the first forum on cross-cultural practice in clinical neuropsychology, convened at the Australian Psychological Society (APS) 1998 National Conference of the College of Clinical Neuropsychologists. His paper provided an eloquent and timely summary of pertinent issues and challenges for neuropsychology (Klimidis, 1998).

Having practised as a neuropsychologist, he had a sound understanding of the psychometric properties of psychological assessment instruments and the potentially distorting effects that administration in cross-cultural settings could have on the validity of the results (Klimidis & Tokgoz, n.d.). He was therefore dedicated to imparting this knowledge to colleagues in psychology to ensure that important decisions regarding the functioning of a child, adult or aged person of CALD background were not made on the basis of invalid test scores. For this reason he sought an expression of interest from the editor of

Australian Psychologist in publishing the papers that appear in this issue. These papers had their origins in a conference on issues in cross-cultural psychological assessment, convened by the VTPU in Melbourne, Australia, in May 2008. Having communicated his enthusiasm for these issues to me, we worked together to convene the conference and to compile this special issue. (The conference Organising Committee also included Sarah Murgia, Clinical Psychologist and Education and Service Development Consultant of the VTPU, Dr Alan Tucker, Convenor/Coordinator of the Master of Psychology/Doctor of Psychology (Clinical Neuropsychology) Program at Melbourne's Victoria University, and Kate Fagnani, Events Coordinator at the VTPU.) Assoc. Professor Klimidis saw the conference as a means of drawing together the cross-cultural expertise that exists among Australian psychologists, thereby facilitating cross-fertilisation and sharing of ideas, while publication of the papers would enable wider dissemination of the research and work being done in the field.

As guest editor I owe much to Assoc. Professor Klimidis' inspiration. His depth and range of knowledge in the transcultural mental health field will be greatly missed.

The aims of both the conference and this issue were to raise psychologists' awareness about the potential for diagnostic errors when Western standardised assessment instruments are used in education and mental health settings to assess children, adults and aged persons from cultures in which those measures have not been validated. The level of conference attendance – 150 psychologists and other health professionals from every State in Australia – spoke to the interest and concern by psychologists who are administering assessment instruments to these populations. The participants in the conference were seeking guidance on culturally appropriate assessment procedures, and an opportunity to consult with peers about the development of best practice in this area of psychological work. The papers in this issue represent an effort to generate

further debate, research and education in this field in Australia.

The use of standardised instruments in cross-cultural psychological assessment is increasingly emerging as an international concern (e.g., Agronovich & Puente, 2007; Arnold & Matus, 2000; Nell, 2000, Rosselli & Ardila, 2003), although recognition of possible cultural differences in cognitive processing has a long history, including, for example, the Luria (1979, cited in Nell, 2000) study in Uzbekistan in 1933, the Turnbull (1961) observations of the BaMbuti Pygmy tribe in the 1950s, and the Cole, Gay, and Glick (1974) work with the Kpelle tribe in the 1960s. The issue is particularly salient, however, in a society as culturally diverse as Australia. In 2006, 14% of Australia's population (or more than 2.8 million people) was born in a country where English was not the first language (Australian Bureau of Statistics [ABS], 2006a). In some areas, such as Dandenong, in Melbourne's southeastern suburbs, as much as 47% of the population has been born in a non-English-speaking country (ABS, 2006b). Australia's population has come from more than 270 different countries, and more than 400 different languages, including indigenous languages, are spoken at home by 16% of the population (ABS, 2006a,c).

Although sparse in number, recent Australian research studies are also raising awareness of the influence that culture and language may have on performance on cognitive assessment instruments. Carstairs, Myors, Shores, and Fogarty (2006) showed that cultural and English proficiency factors influenced performance on non-verbal and verbal measures of cognitive functioning, respectively. Important research to develop a culturally fair instrument for assessment of cognitive functioning in aged persons of CALD background has been conducted by Storey, Rowland, Basic, Conforti, and Dickson (2004), a study that is expanded upon by Basic et al. in this issue. A rare special issue of an APS journal on contributions to cross-cultural psychology (Mead Niblo & Jackson, 2004), published early work with children in Indigenous communities by Kearins (1986), which showed that Indigenous children, whether of traditional or non-traditional background, showed greater strengths on visuospatial tasks than non-Indigenous children. At the other end of the lifespan, the study by Smith et al. in this issue investigates the validity of an instrument to assess dementia in older Indigenous Australians in remote communities, originally developed by LoGuidice et al. (2006).

Included in this issue are papers that encompass issues for children, young people and aged persons in Indigenous Australian, migrant and refugee communities. The first two papers, addressing issues in the cognitive assessment of children of refugee

backgrounds, may be seen as expanding on the issues about assessment raised by Murray, Davidson, and Schweitzer (2008) in their recent review of the psychological wellbeing of refugees resettling in Australia, commissioned by the APS.

In this issue's first article, Kaplan proposes some fundamental reasons as to why performance on assessment instruments by children from refugee backgrounds may not reflect their potential ability. The various traumatic experiences that children of refugee background may have undergone may disrupt concentration and learning. Loss of attachment figures and family dysfunction due to settlement stressors may have developmental consequences associated with deficits in cognitive processing. Kaplan expresses concern about the practice of referring children of refugee background for intellectual disability services and interventions on the basis of psychometric assessment scores, when the standardised instruments administered require cognitive tasks of which the children have little or no experience. To reduce the effect of cultural bias Kaplan recommends limited use of standardised assessment instruments, which should be accompanied by qualitative observations of performance and a comprehensive history, rather than relying on test scores alone. Kaplan also recommends that assessments should contain implications for intervention.

Kaplan's article is complemented by the paper by Fraine and McDade, educational psychologists, who have developed a comprehensive school-based approach to assessment of students of refugee background. The authors too express concern that, when refugee students experience learning difficulties, they are being referred for assessment of intellectual disability. Factors influencing performance on standardised instruments are reviewed, with a focus on the effects that disrupted first language development may have on second language acquisition. Fraine and McDade have developed a longitudinal four-stage support and assessment process that commences with the enrolment of students from refugee background. Progress is monitored over time, with the participation of student assistance teams. Only if the student fails to progress as expected are judiciously selected standardised instruments used, which are interpreted together with previously collected observational data. According to Fraine and McDade, the benefits of this approach are that it is intervention rather than disability focused, and increases the likelihood of effective instruction suited to the students' needs.

Moving to the other end of the age-spectrum, Plitas, Tucker, Kritikos, Walters, and Bardenhagen demonstrate the difficulties encountered in conducting valid assessment of cognitive impairment in aged migrants. Evidence is reviewed that aged persons of

migrant backgrounds may be disadvantaged when being assessed for dementia on standardised neuropsychological instruments, showing poor cognitive performance not reflective of effective everyday functioning. Because available norms have usually not included Australian CALD groups in standardisation samples there is a risk that CALD individuals could be misdiagnosed as cognitively impaired because of low scores on standardised instruments. Plitas et al. investigate whether Greek norms for the Mini-Mental State Examination (MMSE) and Cambridge Cognitive Examination of the Elderly are more valid for elderly Greek Australian migrants than Australian norms. Recommendations are made to increase the cross-cultural sensitivity of neuropsychological assessment processes.

An alternative to using Western standardised instruments that, even in translation, may be culturally biased (Bontempo, 1993), is to develop measures that investigate local concepts of interest (such as intelligence, or dementia) within a culture and to develop and validate measures relevant to these culture-specific concepts (Patel, Simunyu, Gwanzura, Lewis, & Mann, 1997; Sternberg, 2007). These can then be compared with findings from standardised instruments to identify universal dimensions. This combined *emic* and *etic* approach has been taken to the development of both the Rowland Universal Dementia Assessment Scale (RUDAS), which is further tested in a study by Basic et al. in this issue, and the Kimberley Indigenous Cognitive Assessment (KICA) tool, further validated by Smith et al. The traditionally imposed *etic* approach to cross-cultural psychological research searches for universal laws of psychology that are identified by the application of instruments developed in Western cultures in non-Western cultures. The concepts being measured, however, may have no validity in those cultures (Berry, 1979; Mead Niblo & Jackson, 2004). In contrast, in an *emic* approach, local meanings of concepts are investigated within the culture, using a qualitative approach, and measures are developed to assess *emic* concepts (Berry, 1979).

In the fourth paper Basic et al. report on a study comparing performance on the RUDAS with the frequently used MMSE and the General Practitioner Assessment of Cognition (GPCOG). The aim was to determine whether the RUDAS performed at least as well as the other two measures, because the RUDAS, unlike the MMSE, is not influenced by culture or education, and does not, unlike the GPCOG, require an informant. In the process of developing the RUDAS, Storey et al. (2004) demonstrated an *emic* approach by working with advisory groups that included representatives from 22 CALD groups who advised on the cultural and linguistic equivalence

of items. The researchers consulted with professional interpreters, and tested the instrument in multicultural samples. *Etic* aspects of the study involved an advisory group of health professionals who were consulted on the psychometric properties of items. Ultimately six items assessing a range of cognitive functions were retained, which can be readily translated into other languages without affecting the psychometric properties of the instrument. Comparative findings are presented by Basic et al. for the RUDAS, MMSE and GPCOG from CALD samples of elderly persons attending memory clinics in Melbourne and Adelaide, both to determine whether the validity of the RUDAS was retained beyond the original Sydney study, and to test its comparative accuracy in predicting a DSM-IV diagnosis of dementia. Recommendations are made regarding the relative merits of the three instruments for identifying dementia in aged persons of CALD backgrounds.

In the fifth study in this issue, Smith et al. report on revalidation studies of the KICA, a cognitive assessment instrument previously developed for use in remote indigenous communities. The KICA was developed to overcome the educational and cultural biases shown by instruments traditionally used to assess for dementia. The researchers show a commendable approach to working with the participating Indigenous communities. As recommended by health and mental health professionals working with indigenous communities (Sheldon, 2001; Vicary & Westerman, 2004; Westerman, 2004), and the APS (2008a) *Guidelines for the provision of psychological services for, and the conduct of psychological research with, Aboriginal and Torres Strait Islander people of Australia*, the researchers followed a process of engagement and cooperation with the local Indigenous communities. The communities were involved from the process of development, to feedback and review. As explained by Smith et al., the research team learned about local indigenous concepts of dementia, demonstrating how symptoms may be misinterpreted by health professionals. As well as including adapted items from existing instruments, items in the KICA-Cog (a subtest of the KICA) draw on familiar local objects, activities, and events to test relevant aspects of cognitive functioning, and Kimberley linguists and local interpreters were involved in development, translation and administration of the instrument. The current study re-evaluated whether the KICA-Cog retained its validity and reliability in two Indigenous communities beyond the original Kimberley population in which it was developed. Results are reported regarding validity, which was determined by comparing KICA results with standard diagnostic criteria regarding the presence of cognitive impairment.

The availability of culturally relevant assessment tests and processes such as the RUDAS and KICA will aid CALD and Indigenous communities to obtain appropriate services when needed. When culturally appropriate assessment instruments are not available, no matter what the age group, there is a risk of errors in diagnosis, with the consequence that either inappropriate treatment is provided or treatment that is needed is denied (Artiola i Fortuny & Mullaney, 1998).

An issue that remains to be addressed is the development of guidelines and cultural competencies for psychologists practising in the field, who are required to undertake assessments for which no valid and normed instruments are available for a particular CALD group. Although the articles by Basic et al. and Smith et al. demonstrate that important progress has been made in developing culturally fair instruments for identifying dementia, no such methodology appears to be on the horizon for assessing the intellectual ability of children and adolescents from CALD backgrounds in schools. As recommended by Kaplan, and Fraine and McDade in this issue, if standardised instruments are to be used, analysis of performance on the subscales should provide the basis for developing hypotheses regarding functioning, which can then be tested by further observation in various contexts. Important decisions and recommendations should not be made solely on the basis of test scores. Further consultation and collaboration, however, is required to establish a format for psychological reports that presents findings from both qualitative and standardised assessments, and that is accepted and acknowledged by referring agents.

At present the APS *Code of ethics* (APS, 2007) and the APS *Guidelines for the use of psychological tests* (APS, 2008b) provide only minimal guidance on culturally appropriate approaches to psychological assessment. The section on "Guidelines for psychological testing of indigenous people" included in the APS *Guidelines for the provision of psychological services for, and the conduct of psychological research with, Aboriginal and Torres Strait Islander people of Australia* (APS, 2008a) is highly salient to assessment of individuals of CALD backgrounds. Work is currently under way with the APS to develop guidelines relevant to CALD populations.

Performance does not always equate to ability. [Klimidis, 2005]

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Yvonne Stolk
Victorian Transcultural Psychiatry Unit
Fitzroy, Victoria, Australia

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